FOTEBO" 0866h660

# CREATING OPTIMIZED MAPPINGS FOR VT1.5 AND VT2 SWITCHING

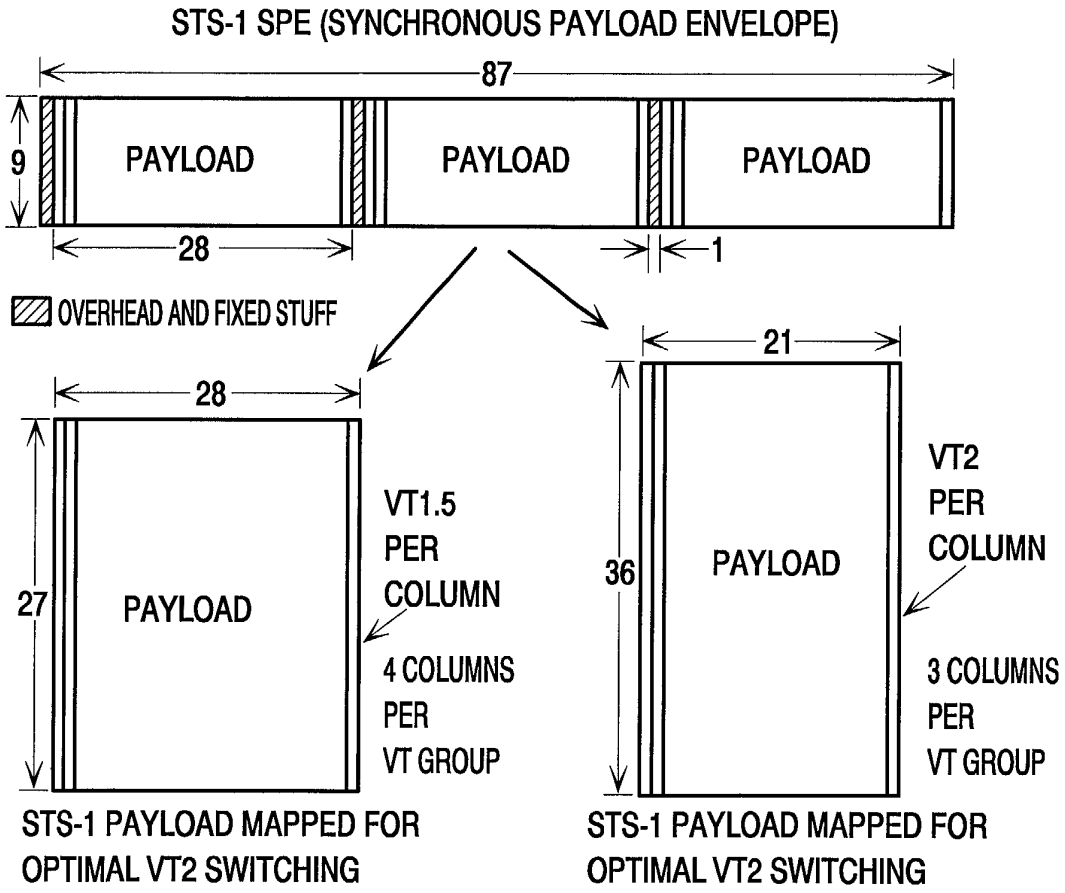


*Fig. 1*
*Prior Art*

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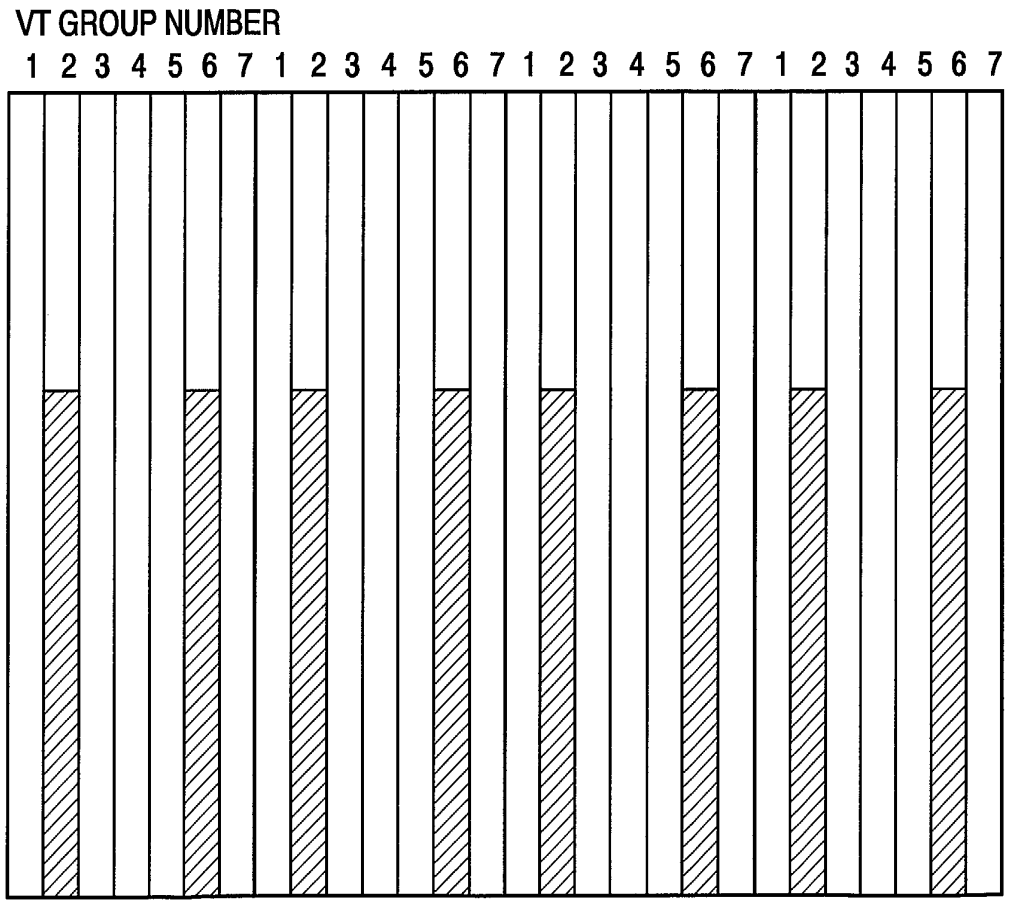
# Mixing VT2s into a VT1.5-optimized Configuration




IN THIS EXAMPLE, VT GROUPS 3, 4 AND 7 ARE VT1.5S WHILE VT GROUPS 1 AND 2 ARE COMBINED TO CARRY A SINGLE VT2. THE SAME IS SHOWN FOR VT GROUPS 5 AND 6.

THE DARK AREAS REPRESENT WASTED BANDWIDTH (33% PER VT2 CARRIED).



*Fig. 2*
*Prior Art*

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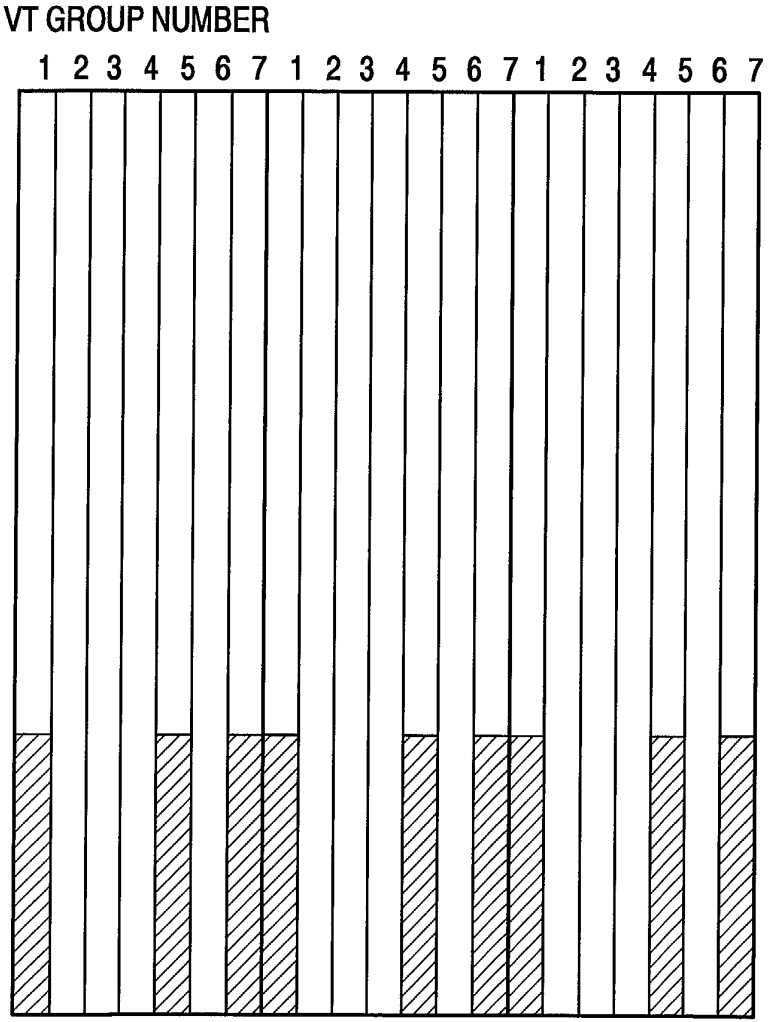
# Mixing VT1.5s into a VT2-optimized Configuration




IN THIS EXAMPLE, VT GROUPS 2, 3, 4 AND 6 ARE CARRYING VT2S WHILE VT GROUPS 1.5 AND 7 ARE MAPPED WITH VT1.5S.

THE DARK AREAS REPRESENT WASTED BANDWIDTH (25% PER VT1.5 CARRIED).



*Fig. 3*
*Prior Art*

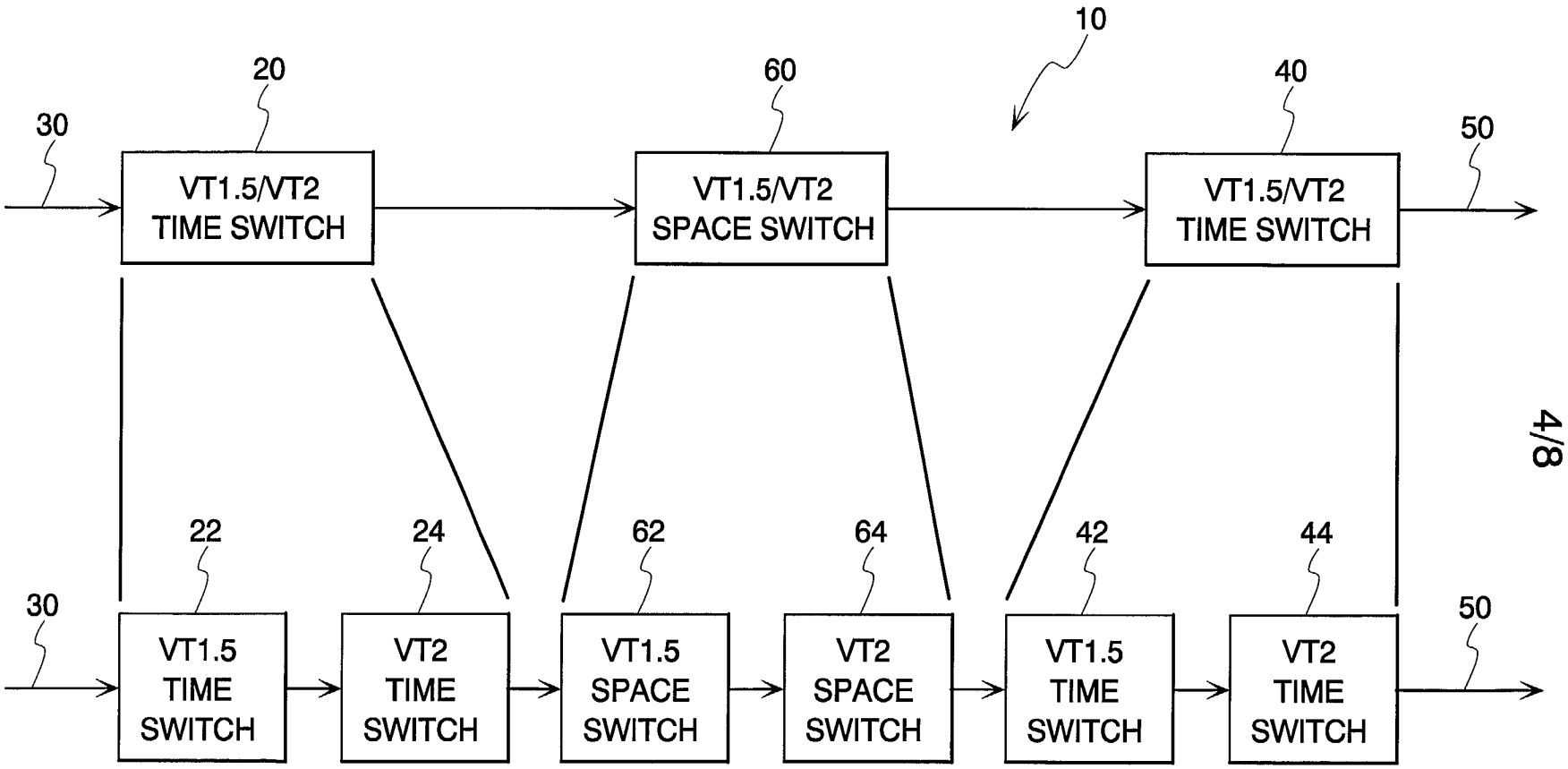

10
20
60
40
30
50
VT1.5/VT2
TIME SWITCH
VT1.5/VT2
SPACE SWITCH
VT1.5/VT2
TIME SWITCH
22
24
62
64
42
44
30
50
VT1.5
TIME
SWITCH
VT2
TIME
SWITCH
VT1.5
SPACE
SWITCH
VT2
SPACE
SWITCH
VT1.5
TIME
SWITCH
VT2
TIME
SWITCH

*Fig. 4*

IN THIS EXAMPLE, VT GROUPS 3, 5, AND 7 CARRY VT1.5S WHILE VT GROUPS 1, 2, 4 AND 6 CONTAIN VT2S.

THE DARK COLUMNS REPRESENT NON-VT1.5 TRAFFIC WHICH IS IGNORED BY THE VT1.5 SWITCHING ELEMENTS.

ALL WHITE COLUMNS CAN BE INTERCHANGED WITH EACH OTHER FOR FULL TIME MANIPULATION OF THE VT1.5 TRAFFIC CONTENT.

VT GROUPS 1, 2, 4 AND 6 CAN BE EXCHANGED IF ALL 4 COLUMNS MAKING UP EACH GROUP ARE KEPT TOGETHER AND IN THE SAME RELATIVE ORDER.

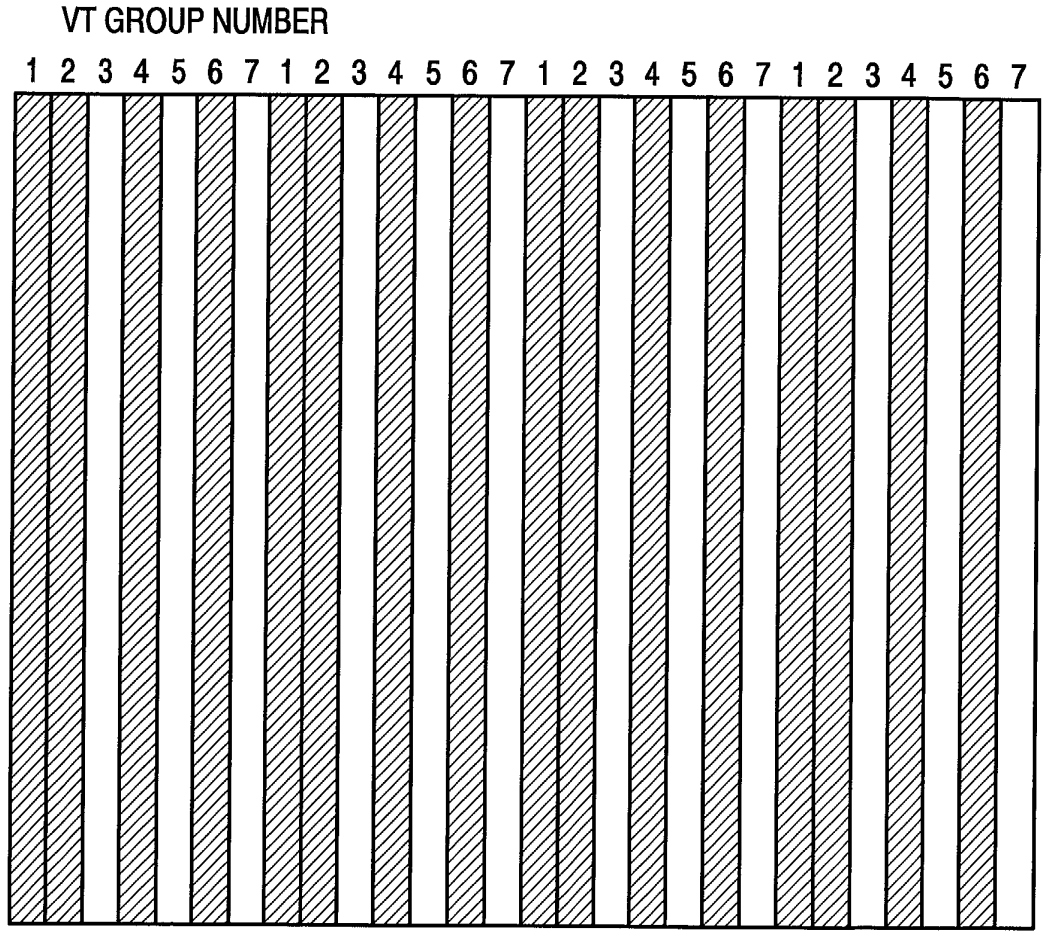





*Fig. 5*

Time Switching Mixed VT Traffic: VT1.5 Time Switch Step

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CONTINUING WITH THE SAME EXAMPLE AS IN FIGURE 5, VT GROUPS 3, 5, AND 7 CARRY VT1.5S WHILE VT GROUPS 1, 2, 4 AND 6 CONTAIN VT2S.

THE DARK COLUMNS REPRESENT NON-VT2 TRAFFIC WHICH IS IGNORED BY THE VT2 SWITCHING ELEMENTS.

ALL WHITE COLUMNS CAN BE INTERCHANGED WITH EACH OTHER FOR FULL TIME MANIPULATION OF THE VT2 TRAFFIC CONTENT.

VT GROUPS 3, 5 AND 7 CAN BE EXCHANGED IF ALL 3 COLUMNS MAKING UP EACH VT GROUP KEPT TOGETHER AND IN THE SAME RELATIVE ORDER.

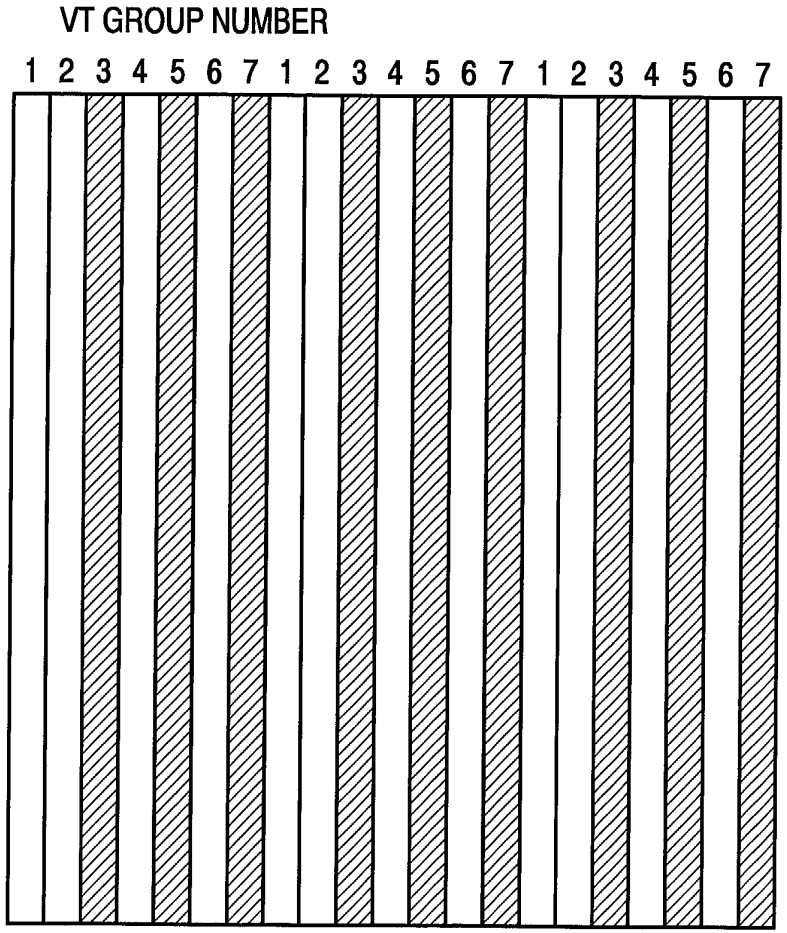


*Fig. 6*

Time Switching Mixed VT Traffic: VT2 Time Switch Step

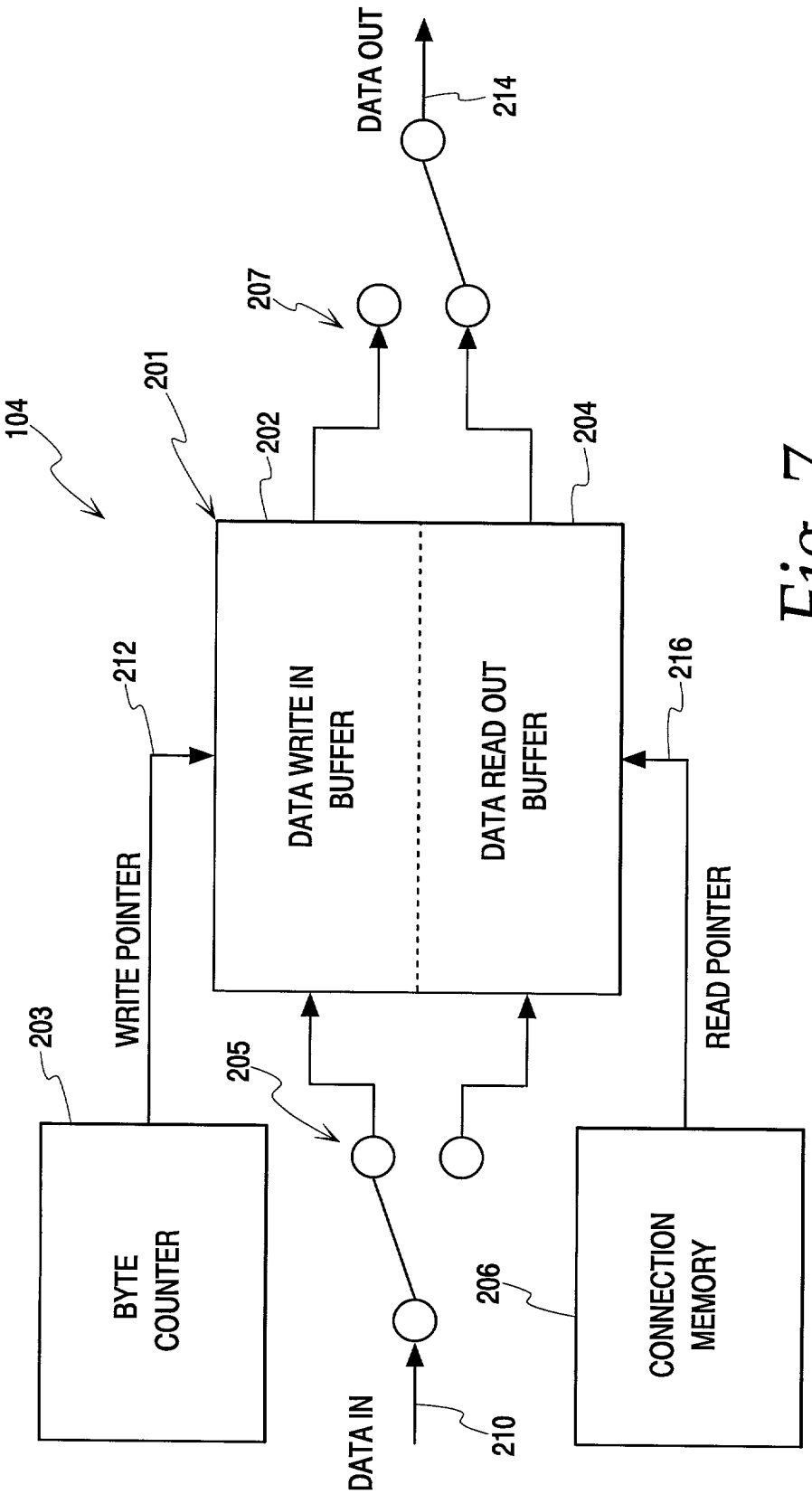
DATA OUT
214
207
201
104
202
204
212
DATA WRITE IN BUFFER
DATA READ OUT BUFFER
216
WRITE POINTER
READ POINTER
203
205
BYTE COUNTER
CONNECTION MEMORY
206
DATA IN
210

*Fig. 7*

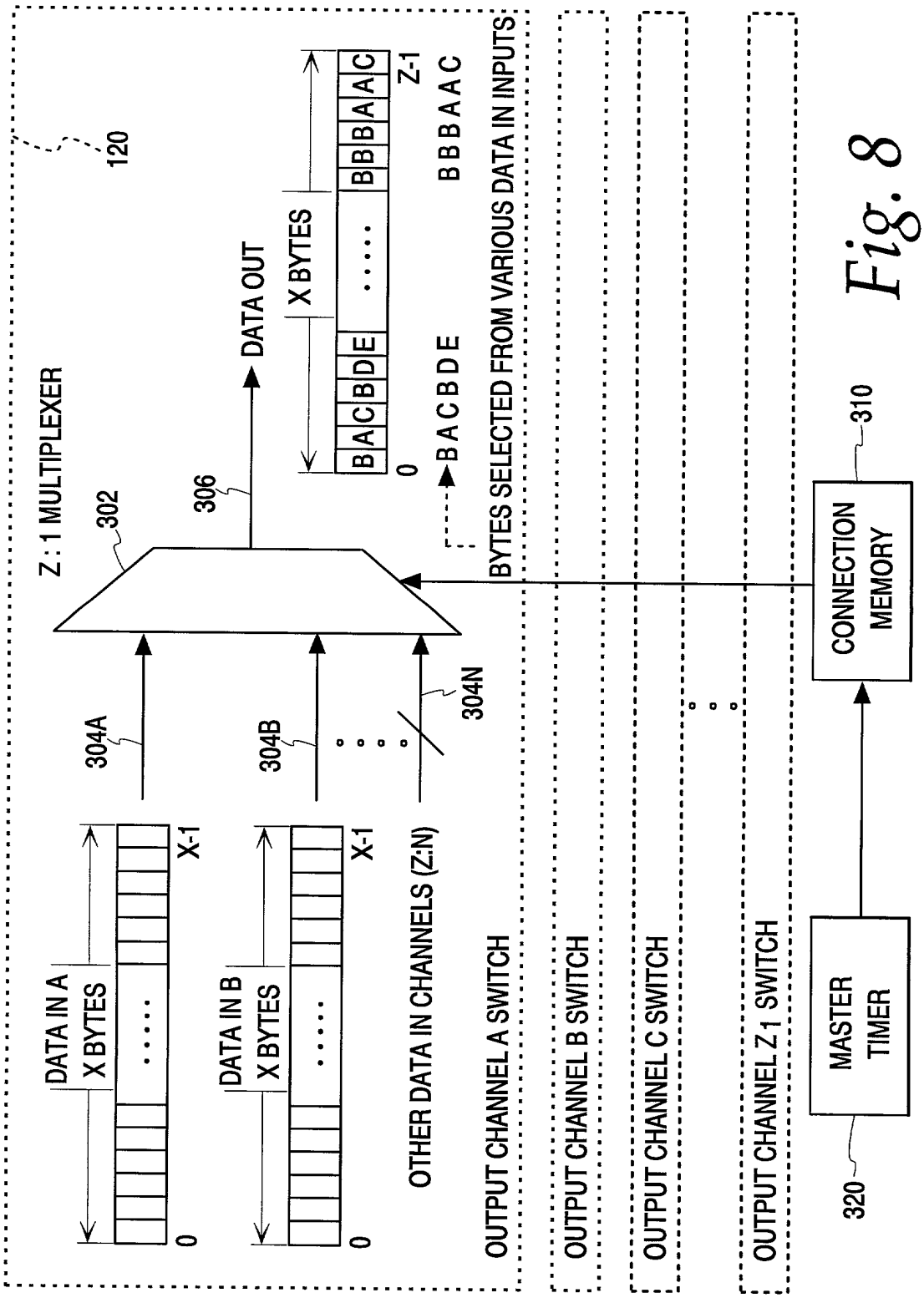
OUTPUT CHANNEL A SWITCH
OUTPUT CHANNEL B SWITCH
OUTPUT CHANNEL C SWITCH
OUTPUT CHANNEL Z 1 SWITCH
Z : 1 MULTIPLEXER
120
302
306
DATA OUT
X BYTES
Z-1
0
B A C B D E . . . . . B B B A A C
B A C B D E
B B B A A C
BYTES SELECTED FROM VARIOUS DATA IN INPUTS
304A
304B
304N
DATA IN A
X BYTES
DATA IN B
X BYTES
X-1
0
OTHER DATA IN CHANNELS (Z:N)
CONNECTION MEMORY
310
MASTER TIMER
320

Fig. 8